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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/774,722	02/09/2004	Rui Resendes	PO-8106/PS-1135	9537
157 7590 12/27/2006 BAYER MATERIAL SCIENCE LLC 100 BAYER ROAD PITTSBURGH, PA 15205			EXAMINER POULOS, SANDRA K	
			ART UNIT	PAPER NUMBER
			1714	
SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE	DELIVERY MODE	
3 MONTHS		12/27/2006	PAPER	

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/774,722	<b>Applicant(s)</b> RESENDES ET AL.	
	<b>Examiner</b> Sandra K. Poulos	<b>Art Unit</b> 1714	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 29 September 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) 13-19 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### DETAILED ACTION

1. All outstanding rejections and objections except for those described below are overcome by applicant's amendment filed 9/29/06.

The terminal disclaimers filed on 9/29/06 disclaiming the terminal portion of any patent granted on this application which would extend beyond the expiration date of US Patent No. 7,015,265 and 6,992,122 have been reviewed and is accepted. The terminal disclaimers have been recorded.

Applicant's statement of common ownership for US Patent No. 7,015,265 is acknowledged.

Upon consideration of applicant's arguments, the rejections set forth in the action mailed 3/29/06 have been reconsidered and the following new grounds of rejection have been set forth below. Accordingly, the following action is **NON-FINAL**.

### *Election/Restrictions*

2. Newly submitted claims 13-19 are directed to an invention that is independent or distinct from the invention originally claimed for the following reasons:

Claims 1-12 (Invention I), drawn to a process of preparing a filled halobutyl elastomer and a process of improving abrasion resistance of an elastomer composition, classified in class 523, subclass 200 are patentably distinct from new claims 13-19 (Invention II), drawn to a filler, classified in class 556, subclass 170 or 400.

The inventions are distinct, each from the other because:

Inventions I and II are related as product and process of use. The inventions can be shown to be distinct if either or both of the following can be shown: (1) the process for using the product as claimed can be practiced with another materially different product or (2) the product as claimed can be used in a materially different process of using that product. See MPEP § 806.05(h). In the instant case the filler is deemed useful as a binder in cement.

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 13-19 are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1, 3, 6-10 and 12 are rejected under 35 U.S.C. 102(b) as being anticipated by Clayton (US 3,337,391).

Clayton discloses a siliceous material (the examples use silica) that is combined with a curable organic polymer (col 1-2). The rubbers include chlorinated or brominated isobutylene-isoprene copolymer, which is a type of halobutyl elastomer. The silica has a

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titanium compound applied to the surface and is capable of reacting with the silica, wherein the compound has the formula given in column 1, and contains hydroxyl and amino groups. It is the examiner's position that the generic chemical formula given in column 1 is sufficiently limited such that one of ordinary skill in the art is able to "at once envisage" the specific compound within the generic chemical formula (MPEP § 2131.02). Moreover, it is settled in case law that the compound is therefore anticipated. *In re Petering*, 301 F.2d 676, 133 USPQ 275 (CCPA 1962). The reference is silent with respect to silazane, and thus meets the requirement that it is optional. The amount of titanium compound in the example is 0.6 parts per 100 parts elastomer (col 3).

Thus Clayton anticipates the cited claims.

### ***Claim Rejections - 35 USC § 103***

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

4. Claims 1-10 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hopkins et al (US 2002/0156173).

The rejection is adequately set forth in paragraph 8 of Office action mailed 3/29/06 and is incorporated herein by reference.

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5. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hopkins as applied to claims 1-10 and 12 above, and further in view of Hergenrother (US 6,180,710).

The discussion with respect to Hopkins in paragraph 8 of Office action mailed 3/29/06 is incorporated herein by reference.

Hopkins does not disclose a silazane compound.

Hergenrother discloses that when surface modified silica is incorporated into rubber compositions, the result is improved processability and modulus (col 2, lines 40-50). The properties are demonstrated when a variety of silanes and processing aids are added to the silica (abstract). The silica surface is modified with from about 0.1 or 0.5 to 18 to 20 parts of a silane, including disilazane (col 3 line 60 to col 4 line 16). Rubbers include halobutyl rubbers (col 4, lines 64-67).

It would have been obvious to one of ordinary skill in the art to use silazane as a modifier for the silica in Hopkins in order to improve processability and modulus when incorporated into rubber compositions.

### ***Response to Arguments***

6. Applicant's arguments filed 9/29/06 regarding Hopkins have been fully considered but they are not persuasive.

Applicant argues that Hopkins does not disclose the step of reacting the filler with the organic compound prior to admixing with the halobutyl rubber. Although he does not explicitly disclose this step, Hopkins discloses that the additive possesses the ability to

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react with the filler or with the active halogen in a halogenated butyl rubber (para 28).

Thus since he does not disclose any particular order, the additive would either react first with the filler or the rubber, and in the instance it reacts with the filler first, it would be reacted prior to the rubber and meet the limitations of the claims.

The rejection regarding Resendes (US 6,706,804) has been withdrawn in view of applicant's arguments. However, upon further consideration, a new ground(s) of rejection is made above.


### **Contact Information**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sandra K. Poulos whose telephone number is (571) 272-6428. The examiner can normally be reached on M-F 8:00-4:30 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on (571) 272-1119. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

  
Sandra K. Poulos

  
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